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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,881	08/25/2003	Rollin George Giffin III	133638	3187
30503	7590	09/25/2006	EXAMINER	
STEVEN J. ROSEN, PATENT ATTORNEY 4729 CORNELL RD. CINCINNATI, OH 45241			FREAY, CHARLES GRANT	
			ART UNIT	PAPER NUMBER
			3746	

DATE MAILED: 09/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/647,881

Applicant(s)

GIFFIN ET AL.

Examiner

Charles G. Freay

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) 21 and 23-55 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 16 is/are rejected.
- 7) ☒ Claim(s) 11-15, 17-20 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 8/2003
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election without traverse of species 1 in the reply filed on August 8, 2006 is acknowledged.

The applicant sets forth that claims 1-20, 22, 37-42, 48 and 49 read on species 1. However, the examiner notes that claim 37 includes the limitation of "the second counter-rotatable fan having axially spaced apart rows of first and second stage blades and a row of second stage fan vanes there between". The applicant on page 23 of the August 8, 2006 response noted that this limitation was included in claims 27-31 and therefore those claims were not part of the elected invention. For this reason, the examiner also finds that claim 37 and claims 38-42, 48 and 49 which depend therefrom, do not read on the elected species. Therefore the examiner has withdrawn these claims as being directed to non-elected subject matter.

### ***Claim Objections***

Claim 11 is objected to because of the following informalities: In the third to the last line "variable" should be deleted before "low pressure stator vanes" in order to agree with the amendment made to the previous paragraph of the claim. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (USPN 5,404,713) in view of DiPietro, Jr. (USPN 6,339,927).

Johnson discloses a FLADE gas turbine engine having a fan (32), driven by a low pressure turbine (28), a FLADE fan blade (5) located radially outwardly of the fan blade, a core engine including a high pressure compressor (20), a core driven fan (34), a combustor (22), a high pressure turbine (24), there is also a fan bypass duct (52), a fan tip duct (56), and first (98) and second (104) varying means (83) for independently varying flow area of the vane tip sections. Further Johnson discloses a variable area

center body nozzle (218). Johnson does not disclose that there are first and second counter-rotatable fans or a translatable plug. DiPietro, Jr. discloses a turbofan engine having first (18) and second (27) counter-rotatable fans. At the time of the invention it would have been obvious to one of ordinary skill in the art to replace the single fan spool of Johnson with a twin spool counter-rotatable fan arrangement such as taught by DiPietro in order to obtain increased aerodynamic performance, and high relative velocities between the blades at relatively low blade velocities, resulting in increased machine life. With regards to claim 16 the examiner gives official notice that translatable plugs are well known mechanisms in turbofan engines and that at the time of the invention it would have been obvious to one of ordinary skill in the art to use such a translatable plug as a means to vary the exhaust area having reduced complexity.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (USPN 5,404,713) in view of Czachor (USPAP 2004/0156719).

Johnson discloses a FLADE gas turbine engine having a fan (32), driven by a low pressure turbine (28), a FLADE fan blade (5) located radially outwardly of the fan blade, a core engine including a high pressure compressor (20), a core driven fan (34), a combustor (22), a high pressure turbine (24), there is also a fan bypass duct (52), a fan tip duct (56), and first (98) and second (104) varying means (83) for independently varying flow area of the vane tip sections. Further Johnson discloses a variable area center body nozzle (218). Johnson does not disclose that there are first and second counter-rotatable fans or that there is a translatable plug for varying exhaust area.

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Czachor discloses a turbofan engine having first (4) and second (6) counter-rotatable fans. At the time of the invention it would have been obvious to one of ordinary skill in the art to replace the single fan spool of Johnson with a twin spool counter-rotatable fan arrangement such as taught by Czachor in order to obtain increased fan output with improved turbine performance (note the BACKGROUND section). With regards to claim 16 the examiner gives official notice that translatable plugs are well known mechanisms in turbofan engines and that at the time of the invention it would have been obvious to one of ordinary skill in the art to use such a translatable plug as a means to vary the exhaust area having reduced complexity.

#### ***Allowable Subject Matter***

Claims 11-15, 17-20 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


#### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Krebs et al discloses a counter-rotating turbofan engine.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles G. Freay whose telephone number is 571-272-4827. The examiner can normally be reached on Monday through Friday 8:30 A.M. to 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Thorpe can be reached on 571-272-4444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Charles G Freay  
Primary Examiner  
Art Unit 3746

CGF  
September 16, 2006